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McGinn & Gibb, PLLC  
Suite 200  
8321 Old Courthouse Road  
Vienna, VA 22182-3817

EXAMINER
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TRUONG, CAM Y T

ART UNIT	PAPER NUMBER
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2162

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,895

Applicant(s)

ASAI ET AL.

Examiner

Cam Y T Truong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant has amended claims 1, 4-5, added claims 6-19 and canceled claim 3 in the amendment filed on 2/7/2005. Claims 1, 2, 4-19 are pending in this Office Action.

Applicant's arguments with respect to claims 5-19 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued on pages 13 -16 that Vora does not teach a first interface for separably and directly, without via a network, connecting the search device and the command execution device; determining whether the received search command can be transmitted to another database server and transmitting the received search command can be transmitted to another database server; the combination would not teach or suggest each and every element of the claimed invention; no make a prima facie case of obviousness; no motivation or suggestion in the reference to urge the combination; a second interface for separably connecting said storage controller and said command execution device such as devices can be disconnected and a different storage controller can be connected to the command execution device".

Examiner respectfully disagrees the entire allegation as argued.

Applicant argued that Vora does not teach "a first interface for separably and directly, without via a network, connecting the search device and the command execution device". Vora teaches as interface 31 is connected to processor 10 and search engine 207 that is stored in memory 11 without via a

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network (fig. 1).

Applicant argued that Vora does not teach "determining whether the received search command can be transmitted to another database server and transmitting the received search command can be transmitted to another database server". Vora teaches a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has included a determining device to determine that the search request needs to send to the remote processor (col. 1, lines 55-60).

In response to applicant's argument on pages 10 - 13, *a prima facie case of obviousness* is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. Once such a case is established, it is incumbent upon appellant to go forward with objective evidence of unobviousness. In re Fielder, 471 F.2d 640, 176 USPQ 300 (CCPA 1973).

Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification.

#### Interpretation of Claims-Broadest Reasonable Interpretation

During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad

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interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In *re* Prater, 162 **USPQ** 541,550-51 (CCPA 1969).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sanada's teaching of using storage controller to control subsystem 50 for reading data, Fibber Channel Fabric for connecting the storage controller and the host computer 10, and applying a read command from the host computer 10 to the storage controller to Vora's system in order to improve the integrity of Vora's system by allowing a user to access a storage device for reading or writing stored data in the storage device and further eliminating unauthorized access attempts from the host computers to the storage control device.

"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, test is

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what combined teachings of references would have suggested to those of ordinary skill in art."

In re Keller, Terry, and Davies, 208 **USPQ 871 (CCPA 1981)**.

"Reason, suggestion, or motivation to combine two or more prior art references in single invention may come from references themselves, from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181

"[q]uestion is whether there is something in prior art as whole to suggest desirability, and thus obviousness, of making combination." Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company et al. U.S. Court of Appeals Federal Circuit 221 **USPQ 481 Decided Mar. 21, 1984 No 83 1178**.

Applicant argued that Sanada does not teach "a second interface for separably connecting said storage controller and said command execution device such as devices can be disconnected and a different storage controller can be connected to the command execution device". Sanada teaches a second interface for separably connecting said storage controller and said command execution device" as Fibber Channel Fabric as an interface for separably connecting the storage controller and the host computer 10. Because the host computer 10 generates an access request and then executes the access request

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by sending access request to the microprocessor of the storage controller; thus, the host computer is represented as command execution device (fig. 1, col. 5, lines 35-37; col. 6, lines 1-3).

Applicant argued on pages 17-19 that *Vora* nor *De Bellis* does not teach "a first determining device for determining whether the search command, which has been received by the first receiving device, can be transmitted to another database server and a transmitted device for transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server by the first determining device".

Examiner respectfully disagrees the entire allegation as argued since *Vora* teaches a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has included a determining device to determine that the search request needs to send to the remote processor (col. 1, lines 55-60).

In view of the above, the examiner contends that all limitations as recited in the claims have been addressed in this Action.

For the above reason, examiner believed that rejection of the last office action was proper.

***Claim Rejections - 35 USC § 102***

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2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action. -

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5-7, 9, 10, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Vora et al (or hereinafter "Vora") (US 5819273).

As to claim 1, Vora teaches a database system (fig. 1, col. 6, lines 37-43) comprising:

"a database in which data has been stored accessibly" as the mass memory device 17 of the server computer system 9 stores text documents, which may include other information such as graphics. These text documents are searched and retrieved by users of computer system 33. The mass memory is represented as a database (fig. 1, col. 6, lines 37-43);

"a search device for accessing the database in accordance with an applied search command and searching data that has been stored in said database" as processor 10 of the server 9 receives a search request from the processor 37 of the computer system 33 to search documents stored in mass memory 17 by using a search and indexing engine 207. The search and indexing engine 207 is represented as a search device. The search request is presented as a search command (fig. 1, col. 6, lines 48-55);



"a command execution device, to which a command is entered, for applying a search command to said search device in accordance with this entered command" as the computer system 33 allows a user to define a search request by typing into a keyboard keywords. The search request is performed by typically selecting an option representing a start search command, which is displayed on the display device 47. At this point, the processor 37 of computer system 33 sends this search request over the network through network interface 35 and network interface 25 to processor 10 of server 9. The above information shows that the processor 10 of server 9 executes the search request by sending the search request to processor 10 in accordance with selected start search command. Thus, the processor 10 is presented as a command execution device. A start search command is represented as an entered command (fig. 1, col. 6, lines 40-55);

"a first interface for separably connecting, without via a network, said search device and said command execution device" as interface 31 is connected to processor 10 and search engine 207 that is stored in memory 11 without via a network (fig. 1).

As to claim 5, Vora teaches a method of controlling operation of a database server comprising the steps of:

"receiving a search command transmitted via a network" as processor 10 of server 9 receives a search request over the network through network interface 35 and network interface 25. The search request is presented as a search command (fig. 1, col. 6, lines 50-55);

"searching a database based upon the received search command" as performing a first search through the document stored in mass memory 17 based upon the received the search request (col. 6, lines 53-55);

"determining whether the received search command can be transmitted to another database server" as a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has to determine that the search request needs to send to the remote processor (col. 1, lines 55-60);

"transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server" as a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has to determine that the search request needs to send to the remote processor (col. 1, lines 55-60). The server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1);

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"receiving data, which represents search results, transmitted from said another database server in accordance with transmission of the search command to said another database server" as server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. (3, lines 60-67; col. 7, line 1); and

"outputting, in mutually correlated form, data representing search results obtained by the search and data representing received search results" as displaying the combined results of such remote searches with the search results of the server 9 performs on data stored in memory 17 within one window. The combined results are represented as correlated form (fig. 1, col. 6, lines 65-67; col. 7, lines 1-4).

As to claim 6, Vora teaches the claimed limitation "wherein said search device is replaced by a second search device upon separation from said command execution device" as (col. 9, lines 3-8).

As to claim 7, Vora teaches the claimed limitation "wherein said search device employs a search technique different than a search technique of said second search device"(col. 12, lines 22-37).

As to claim 9, Vora teaches the claimed limitation "a command receiving device for receiving the entered command from a client" as (col. 6, lines 55-67).

As to claim 17, Vora does not explicitly teaches the claimed limitation "wherein said determining whether the search command can be transmitted to another database server is based upon data accompanying the search command for determining whether the search command can be transmitted" as the user may enter a single search request and then request either the local processor or a remote processor to execute search request. The above information shows that the system has included a data that is accompanied with the search command to transmit the search request to either local processor or remote processor for executing the search request (col. 1, lines 55-60).

As to claim 10, Vora teaches the claimed limitation "a command resending device for transmitting the entered command to another database server" as (col. 6, lines 55-67).

As to claim 19, Vora teaches a database server comprising:

"a means for receiving a search command transmitted via a network" as processor 10 of server 9 receives a search request over the network through network interface 35 and network interface 25. The search request is presented as a search command (fig. 1, col. 6, lines 50-55);

"a means for searching a database based upon the received search command" as performing a first search through the document stored in mass memory 17 based upon the received the search request (col. 6, lines 53-55);

"a means for determining whether the received search command can be

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transmitted to another database server" as a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has to determine that the search request needs to send to the remote processor (col. 1, lines 55-60);

"a means for transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server" as a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has to determine that the search request needs to send to the remote processor (col. 1, lines 55-60). The server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1);

"a means for receiving data, which represents search results, transmitted from said another database server in accordance with transmission of the search command to said another database server" as server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to

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transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 16, lines 60-67; col. 7, line 1); and "a means for outputting, in mutually correlated form, data representing search results obtained by the search and data representing received search results" as displaying the combined results of such remote searches with the search results of the server 9 performs on data stored in memory 17 within one window. The combined results are represented as correlated form (fig. 1, col. 6, lines 65-67; col. 7, lines 1-4).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of Sanada et al (or hereinafter "Sanada") (US 6484245).

As to claim 2, Vora further teaches "a storage device for storing data readably" as information storage devices coupled to server 63 for storing data.

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This data is searched and retrieved through by searching software on server 63 (col. 6, lines 58-59).

Vora does not explicitly teach the claimed limitation "a storage controller for accessing said storage device and reading data that has been stored in said storage device or writing data to said storage device in accordance with an applied read/write command; and a second interface for separably connecting said storage controller and said command execution device; said command execution device applying a read/write command to said storage controller in accordance with the entered command".

Sanada teaches the above claimed limitations:

"a storage controller for accessing said storage device and reading data that has been stored in said storage device or writing data to said storage device in accordance with an applied read/write command" as the storage controller 40 controls accessing to the disk array for reading data from there upon receipt of read command information from host computer 10 (fig. 1, col. 5, lines 9-10; col. 6, lines 1-8);

"and a second interface for separably connecting said storage controller and said command execution device" as Fibber Channel Fabric as an interface for separably connecting the storage controller and the host computer 10.

Because the host computer 10 generates an access request and then executes the access request by sending access request to the microprocessor of the storage controller; thus, the host computer is represented as command execution device (fig. 1, col. 5, lines 35-37; col. 6, lines 1-3);

" said command execution device applying a read/write command to said storage controller in accordance with the entered command" as the host computer can apply a read command or write command to microprocessor of the storage controller. The above information implies that the host computer has included a command to can send a read or a write command to the microprocessor of the storage controller. This command is represented as the entered command (col. 5, lines 45-55; col. 6, lines 1-3).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Sanada's teaching of using storage controller to control subsystem 50 for reading data, Fibber Channel Fabric for connecting the storage controller and the host computer 10, and applying a read command from the host computer 10 to the storage controller to Vora's system in order to improve the integrity of Vora's system by allowing a user to access a storage device for reading or writing stored data in the storage device and further eliminating unauthorized access attempts from the host computers to the storage control device.

6. Claims 4 and 15 are rejected under 35 U.S.C. 103(x) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of De Bellis (US 6760720).

As to claim 4, Vora teaches a database server (fig. 1, col. 6, lines 37-40) comprising:



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"a first receiving device for receiving a search command transmitted via a network" as the network interface 25 of server 9 receives a search request transmitted from processor 37 over the network. The network interface 25 is represented as a first receiving device. The search request is represented as a search command (fig. 1, col. 6, line 51-55);

"a search device for searching the database based upon the search command received by said first receiving device" as the processor 10 of server 9 executes the received search requests from computer system 33 by performing a first search through the documents is stored in mass memory 17 as a database. The processor 10 is represented as a search device (col. 6, lines 51-55);

"a first determining device for determining whether the search command, which has been received by said first receiving device, can be transmitted to another database server" as a user may enter a single search request and then request either the local processor or a remote processor to execute the search request by performing a search through the information stored in an information storage. In case, after a user enters a single search request and then request a remote search, the system has included a determining device to determine that the search request needs to send to the remote processor (col. 1, lines 55-60);

"a transmitting device for transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server by said first determining device" as the server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to transmit the received

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search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1);

"for receiving data, which represents search results, transmitted from said other database server in accordance with transmission of the search command to said other database server by said transmitting device" as server 9 receives the search results of server 63 as remote searches; after using a local bus 19 of server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1);

"and an output device for outputting, in mutually correlated form, data representing search results obtained by the search by said search device and data representing search results received by said second receiving device" as I/O device (s) 23 of the server 9 is used to display or output the combined results of such remote searches with the results of the server 9 performs on data stored in memory 17 within one window. The I/O device (s) of the server 9 is represented as an output device. The combined results are represented as correlated form (fig. 1, col. 6, lines 65-67; col. 7, lines 1-4).

Vora does not explicitly teach the claimed limitation "a second receiving device".

De Bellis teaches a search engine has a Request Analyzer 130 for receiving search request from client 114 and a Database Driver 170 for receiving

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results of search of the remote database 12 on Internet. The Database Driver 170 is represented as a second receiving device (figs 3&9, col. 4, lines 45-60; col. 4, lines 20-25; col. 9, lines 40-43).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply De Bellis's teaching of a Database Driver 170 for receiving results of search of the remote database 12 on Internet to Vora's system in order to improve flexibility of Vora's system by performing search inglretrieving and displaying a search result to a user quickly and further preventing network traffic between client and server.

As to claim 15, Vora teaches the claimed limitation "wherein the search command is accompanied by data for determining whether the search command can be transmitted to said another database server" as the user may enter a single search request and then request either the local processor or a remote processor to execute search request. The above information shows that the system has included a data that is accompanied with the search command to transmit the search request to either local processor or remote processor for executing the search request (col. 1, lines 55-60).

"said first determining device determining whether the search command can be transmitted based upon the accompanying data" as the user may enter a single search request and then request either the local processor or a remote processor to execute search request. The above information shows that the system has included a data that is accompanied with the search command and a

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determining device for determining to transmit the search request to either local processor or remote processor for executing the search request (col. 1, lines 55-60).

7. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of De Bellis (US 6760720) and Roderick (US 6122648).

As to claim 4, Vora teaches a database server (fig. 1, col. 6, lines 37-40) comprising:

"a first receiving device for receiving a search command transmitted via a network" as the network interface 25 of server 9 receives a search request transmitted from processor 37 over the network. The network interface 25 is represented as a first receiving device. The search request is represented as a search command (fig. 1, col. 6, line 51-55);

"a search device for searching the database based upon the search command received by said first receiving device" as the processor 10 of server 9 executes the received search requests from computer system 33 by performing a first search through the documents is stored in mass memory 17 as a database. The processor 10 is represented as a search device (col. 6, lines 51-55);

"for receiving data, which represents search results, transmitted from said other database server in accordance with transmission of the search command to said other database server by said transmitting device" as server 9 receives the search results of server 63 as remote searches after using a local bus 19 of

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server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1);

"and an output device for outputting, in mutually correlated form, data representing search results obtained by the search by said search device and data representing search results received by said second receiving device" as I/O device (s) 23 of the server 9 is used to display, or output the combined results of such remote searches with the results of the server 9 performs on data stored in memory 17 within one window. The I/O device (s) of the server 9 is represented as an output device. The combined results are represented as correlated form (fig. 1, col. 6, lines 65-67; col. 7, lines 1-4).

Vora does not explicitly teach the claimed limitation "a second receiving device; a first determining device for determining whether the search command, which has been received by said first receiving device, can be transmitted to another database server; a transmitting device for transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server by said first determining device".

De Bellis teaches a search engine has a Request Analyzer 130 for receiving search request from client 114 and a Database Driver 170 for receiving results of search of the remote database 12 on Internet. The Database Driver 170 is represented as a second receiving device (figs 3&9, col. 4, lines 45-60;

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col. 4, lines 20-25; col. 9, lines 40-43). Roderick teaches mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server (col. 7, lines 35-45 ).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply De Bellis's teaching of a Database Driver 170 for receiving results of search of the remote database 12 on Internet and Roderick's teaching of mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server to Vora's system in order to improve flexibility of Vora's system by performing search inglretrieving data in different accurately and displaying a search result to a user quickly and further improve content management of search inglretrieving data over data network for preventing network traffic between client and server.

As to claim 15, Vora does not explicitly teach the claimed limitation "wherein the search command is accompanied by data for determining whether the search command can be transmitted to said another database server; said first determining device determining whether the search command can be transmitted based upon the accompanying data". Roderick teaches mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server (col. 7, lines 35-45).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Roderick's teaching of mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server to Vora's system in order to improve flexibility of Vora's system by performing search inglretrieving data in different accurately and displaying a search result to a user quickly and further improve content management of searching/retrieving data over data network for preventing network. traffic between client and server.

8. Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of Roderick (US 6122648).

As to claim 5, Vora teaches a method of controlling operation of a database server comprising the steps of:

"receiving a search command transmitted via a network" as processor 10 of server 9 receives a search request over the network through network interface 35 and network interface 25. The search request is presented as a search command (fig. 1, col. 6, lines 50-55);

"searching a database based upon the received search command" as performing a first search through the document stored in mass memory 17 based upon the received the search request (col. 6, lines 53-55);

"receiving data, which represents search results, transmitted from said another database server in accordance with transmission of the search

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command to said another database server" as server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1); and

.outputting, in mutually correlated form, data representing search results obtained by the search and data representing received search results" as displaying the combined results of such remote searches with the search results of the server 9 performs on data stored in memory 17 within one window. The combined results are represented as correlated form (fig. 1, col. 6, lines 65-67; col. 7, lines 1-4).

Vora does not explicitly teach the claimed limitation "determining whether the received search command can be transmitted to another database server; transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server". Roderick teaches mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server (col. 7, lines 35-45).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Roderick's teaching of mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server to Vora's



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system in order to search/retrieve data in different server accurately and further improve content management for search in glretrieving data over data network without traffic.

As to claim 19, Vora teaches a database server comprising:

"a means for receiving a search command transmitted via a network" as processor 10 of server 9 receives a search request over the network through network interface 35 and network interface 25. The search request is presented as a search command (fig. 1, col. 6, lines 50-55);

"a means for searching a database based upon the received search command" as performing a first search through the document stored in mass memory 17 based upon the received the search request (col. 6, lines 53-55);

"a means for receiving data, which represents search results, transmitted from said another database server in accordance with transmission of the search command to said another database server" as server 9 receives the search results of server 63 as remote searches after using a local bus 19 of server 9 to transmit the received search request to server 63. Thus, the server 9 combines the search results of such remote searches with the results of the search the server 9 performs on mass memory 17 (fig. 1, col. 6, lines 60-67; col. 7, line 1); and

"a means for outputting, in mutually correlated form, data representing search results obtained by the search and data representing received search results" as displaying the combined results of such remote searches with the

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search results of the server 9 performs on data stored in memory 17 within one window. The combined results are represented as correlated form (fig. 1, col. 6, lines 65-67; col. 7, lines 1-4).

Vora does not explicitly teach the claimed limitation "a means for determining whether the received search command can be transmitted to another database server; a means for transmitting the received search command to said another database server when it is determined that the received search command can be transmitted to said another database server". Roderick teaches mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server (col. 7, lines 35-45).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Roderick's teaching of mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server to Vora's system in order to search/retrieve data in different server accurately and further improve content management for searching/retrieving data over data network without traffic.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of Collby (US 6480836).

As to claim 8, Vora discloses the claimed limitation subject matter in claim 1, except the claimed limitation "a relational database management system

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containing attribute information corresponding to said data, wherein said relational data management system is searchable by said search device". Collby teaches a relational database contains attributes corresponding to search request and relational database is searchable by a search engine (abstract, col. 1, lines 25-45).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Collby's teaching of a relational database contains attributes corresponding to search request and relational database is searchable by a search engine to Vora's system in order to search/retrieve a particular field of a record in a relational database.

10. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of Sanada et al (or hereinafter "Sanada") (US 6484245) and further in view of DeKoning (US 6671776).

As to claim 11, Vora and Sanada disclose the claimed limitation subject matter in claim 2, except the claimed limitation "wherein said storage controller is replaceable by a second controller upon separation from said command execution device". DeKoning teaches each **RAID** controller in the data storage system may be replaced with PCI RAID controllers or other low end RAID controllers (col. 4, lines 17-20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply DeKoning teaching of each RAID

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controller in the data storage system may be replaced with **PCI RAID** controllers or other low end RAID controllers to Vora's system and Sanada's system in order to transmit or execute command when one controller fail, a host system may still access the drive through the remaining controller.

As to claim 12, Vora and Sanada disclose the claimed limitation subject matter in claim 11, except the claimed limitation "wherein said second storage controller is different than said storage controller". DeKoning teaches each RAID controller in the data storage system may be replaced with PCI RAID controllers or other low end RAID controllers (col. 4, lines 17--20).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply DeKoning teaching of each RAID controller in the data storage system may be replaced with PCI RAID controllers or other low end RAID controllers to Vora's system and Sanada's system in order to transmit or execute command when one controller fail, a host system may still access the drive through the remaining controller.

11. Claims 13-14 are rejected under 35 U.S.C. 103(x) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of Sanada et al (or hereinafter "Sanada") (US 6484245) and Lee et al (or hereinafter "6061696).

As to claim 13, Vora and Sanada disclose the claimed limitation subject matter in claim 2, except the claimed limitation "an expression-format converter for generating data having a desired expression format when it is determined

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that data having the desired expression format is not stored in the database".

Lee teaches the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory. The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store the converted format of file into the same or different directory (col. 3, lines 1-5).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Lee's teaching of the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory to Vora and Sanada in order to allow a user to view a data in her own system and further to store data following database format.

As to claim 14, Vora, Sanada and Lee disclose the claimed limitation subject in claim 13, Lee further teaches the claimed limitation "wherein said expression-format converter is separably connected to said command execution device by said second device" as (fig. 9, col. 8, lines 5-20).

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of De Bellis (US 6760720) and further in view of Lee et al (or hereinafter "6061696).

As to claim 16, Vora, Sanada and Lee disclose the claimed limitation subject matter in claim 4, Lee further teaches "a generating device for generating the data having the expression format when it is determined that the data having the expression format is not stored in the database by said second determining device; and storing device for storing the data generating device in the database" as the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory. The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store the converted format of file into the same or different directory (col. 3, lines 1-5).

Vora, Sanada and Lee does not explicitly disclose the claimed limitation "a second determine device for determining whether the data, which has an expression format indicated by the received search command by said first receiving device, is stored in the database". McClure teaches request reception module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and (2) a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database (col. 1, lines 55-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply McClure's teaching of request reception

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module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and (2) a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database to Vora, Sanada and Lee in order to save time retrieving a data in requested format for displaying to a user.

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of De Bellis (US 6760720) and Roderick (US 6122648) and further in view of Lee et al (or hereinafter "6061696").

As to claim 16, Vora, Sanada and Lee disclose the claimed limitation subject matter in claim 4, Lee further teaches "a generating device for generating the data having the expression format when it is determined that the data having the expression format is not stored in the database by said second determining device; and storing device for storing the data generating device in the database" as the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory. The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store

the converted format of file into the same or different directory (col. 3, lines 1-5).

Vora, Sanada and Lee does not explicitly disclose the claimed limitation "a second determine device for determining whether **the data, which has** an expression format indicated by the received search command by said first receiving device, is stored in the database". McClure teaches request reception module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and (2) a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database (col. 1, lines 55-65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply McClure's teaching of request reception module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and (2) a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database to Vora, Sanada and Lee in order to save time retrieving a data in requested format for displaying to a user.

14. Claim 17 is rejected under 35 U.S.C. 103(x) as being unpatentable over



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Vora et al (or hereinafter "Vora") (US 5819273) in view of Roderick (US 6122648).

As to claim 17, Vora does not explicitly teaches the claimed limitation "wherein said determining whether the search command can be transmitted to another database server is based upon data accompanying the search command for determining whether the search command can be transmitted" Roderick teaches mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server (col. 7, lines 35-45).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Roderick's teaching of mining agent 204 employs common gateway interface commands in addition to SQL search commands to access remote databases through a gateway server to Vora's system in order to improve flexibility of Vora's system by performing searching/retrieving data in different accurately and displaying a search result to a user quickly and further improve content management of search inglretrieving data over data network for preventing network traffic between client and server

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of Roderick (US 6122648) and further in view of McClure et al (or hereinafter "McClure") (US 6850928).

As to claim 18, Vora and Roderick disclose the claimed limitation subject matter in claim 5, except the claimed limitation "determining whether the data, which has an expression format indicated by the received search command, is stored in the database; generating data having the expression format when it is determined that the data having the expression format is not stored in the database; and storing the generated data in the database". Lee teaches the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory. The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store the converted format of file into the same or different directory (col. 3, lines 1-5). McClure teaches request reception module that receives a Lightweight **Directory Access Protocol (LDAP)** request for an attribute of the directory object that is expressed in a proprietary format and (2) a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database (col. 1, lines 55 65).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Lee's teaching of the converted format of the object can be stored as a local file apart from the file containing the native

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format version which is maintained in an original file in the same or different directory. The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store the converted format of file into the same or different directory and McClure's teaching of request reception module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database to Vora, Sanada and Lee in order to save time retrieving a data in requested format for displaying to a user or eliminate some execution step for retrieving a data in requested format.

16. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vora et al (or hereinafter "Vora") (US 5819273) in view of McClure et al (or hereinafter "McClure") (US 6850928).

As to claim 18, Vora and Roderick disclose the claimed limitation subject matter in claim 5, except the claimed limitation "determining whether the data, which has an expression format indicated by the received search command, is stored in the database; generating data having the expression format when it is determined that the data having the expression format is not stored in the

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database; and storing the generated data in the database". Lee teaches the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory. The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store the converted format of file into the same or different directory (col. 3, lines 1-5). McClure teaches request reception module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and (2) a request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database (col. 1, lines 5565).

It would have been obvious to a person of an ordinary skill in the art at the time the invention was made to apply Lee's teaching of the converted format of the object can be stored as a local file apart from the file containing the native format version which is maintained in an original file in the same or different directory.

The above information shows that the system has determined that the data having the desired format is not stored in the database; thus, the system converts the format of file or object and store the converted format of file into the same or different directory and McClure's teaching of request reception module that receives a Lightweight Directory Access Protocol (LDAP) request for an attribute of the directory object that is expressed in a proprietary format and (2) a

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request fulfillment module, associated with the request reception module. If the directory object contains the attribute expressed in the proprietary format, the request fulfillment module retrieves the attribute expressed in the proprietary format from the database to Vora, Sanada and Lee in order to save time retrieving a data in requested format for displaying to a user or eliminate some execution step for retrieving a data in requested format.

### ***Conclusion***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

Ohtain(US 6708199)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(x). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(x).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(x) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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### **Contact Information**

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (tollfree).

Cam Y T Truong  
Examiner  
Art Unit 2162  
4/28/2005

  
SHAHID ALAM  
PRIMARY EXAMINER